

Tides and Currents

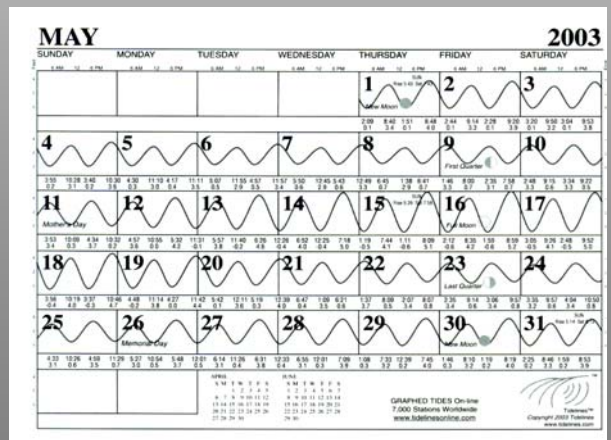
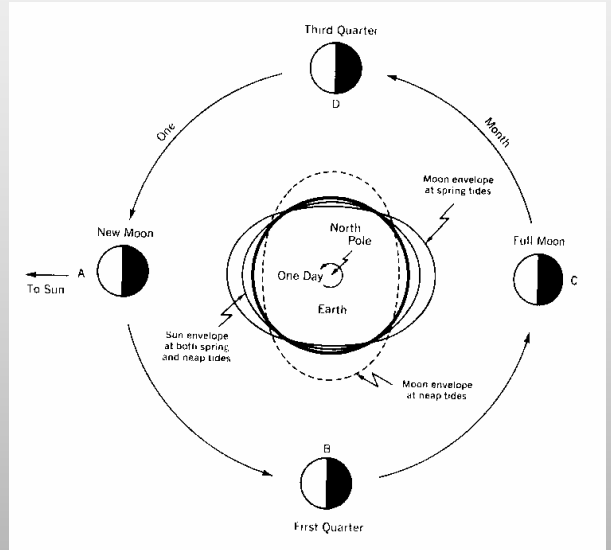
Coasters Harbor Navy Yacht Club

www.nwc.navy.mil/chnyc



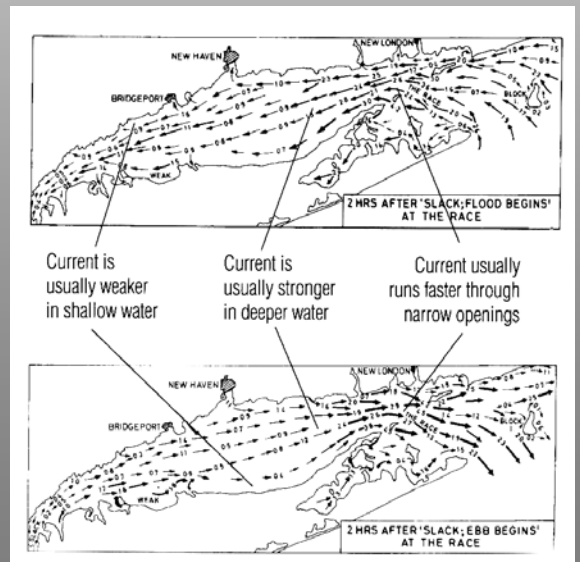
Tides

- **Vertical change in water level**
- **Gravitational pull of moon and sun**
 - Moon moves, so does water level
 - Combine to produce effect
- **Two highs and two lows each day**
- **Look at tide table & chart**
 - Depth of water

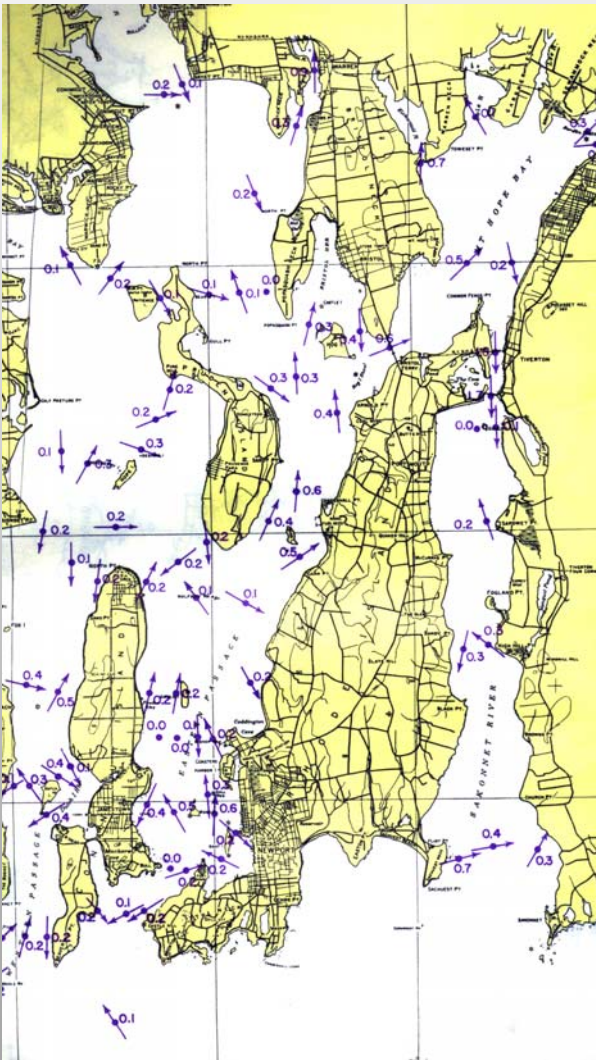


Currents

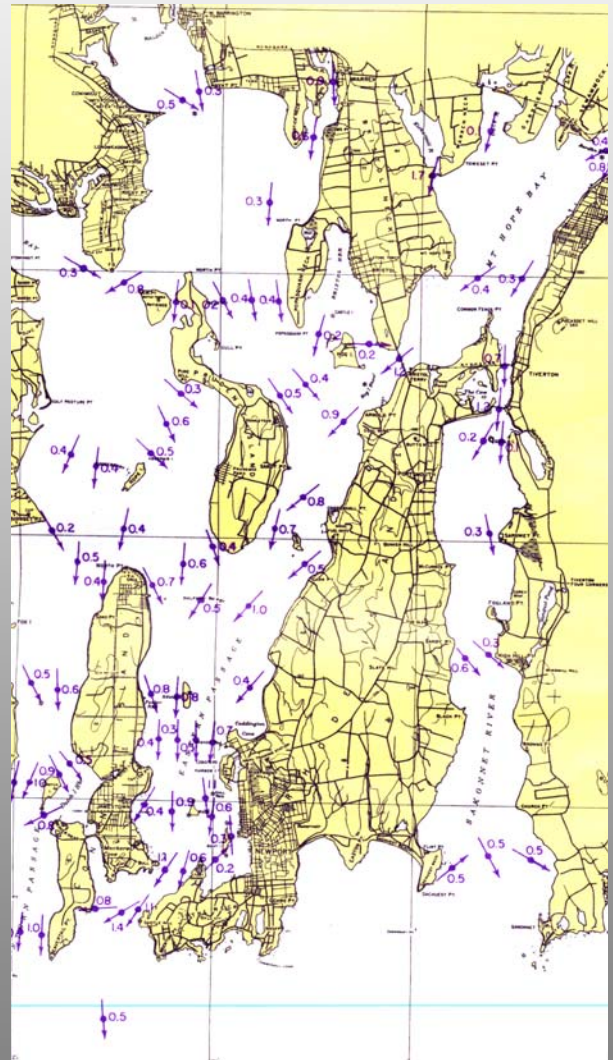
- **Horizontal**
movement of water
 - **Flow caused by wind and ocean movement**
 - **Gulf Stream**
 - **Tides rising and falling**
 - **Coming in: flooding**
 - **Going out: ebbing**



Narragansett Bay

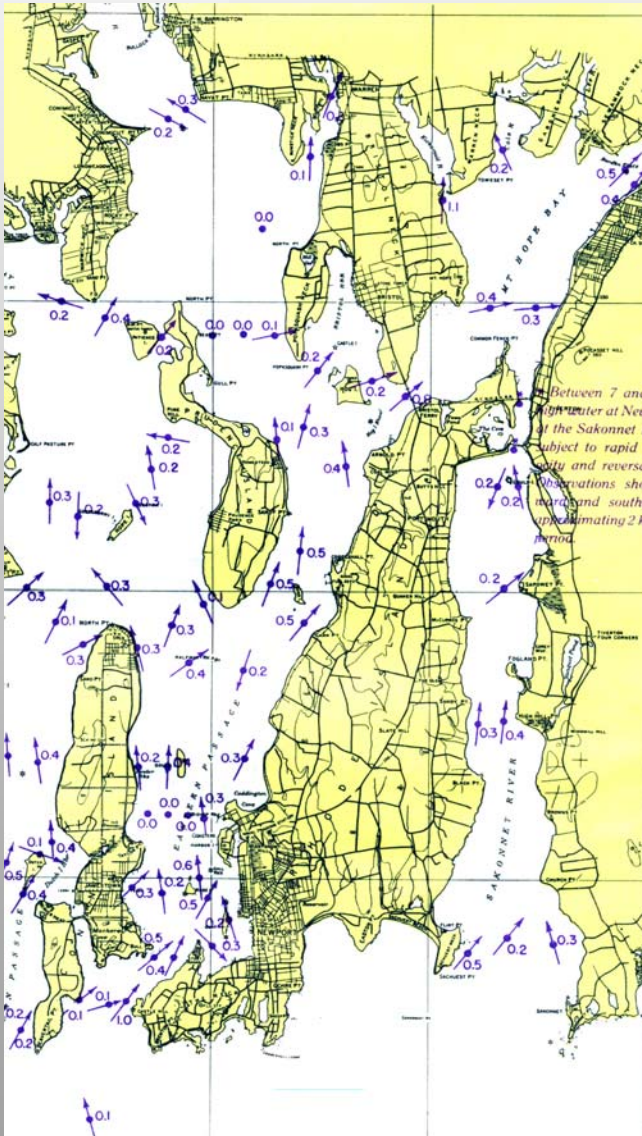


High tide



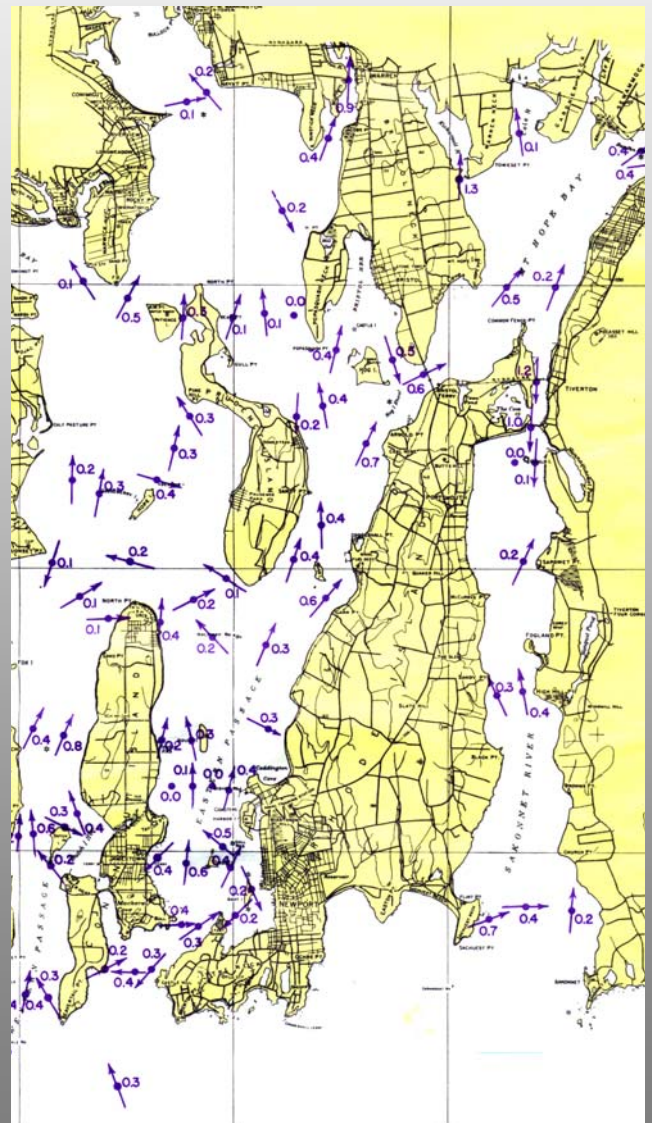
H + 4h

Narragansett Bay



$H + 8h$

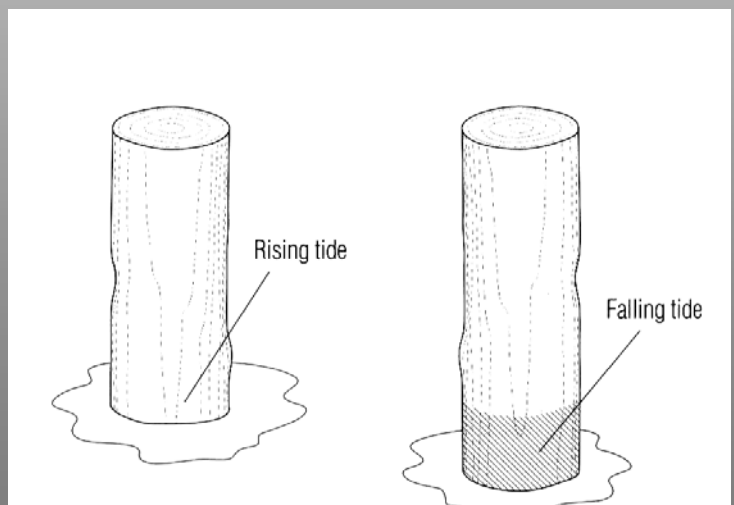
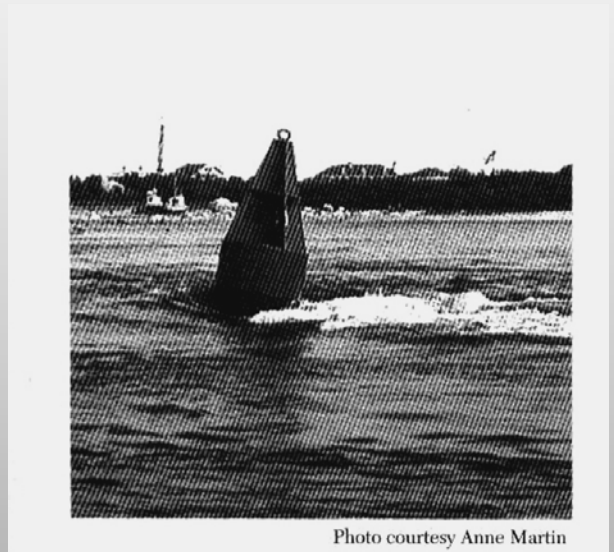
Tides & current



$H + 12h$

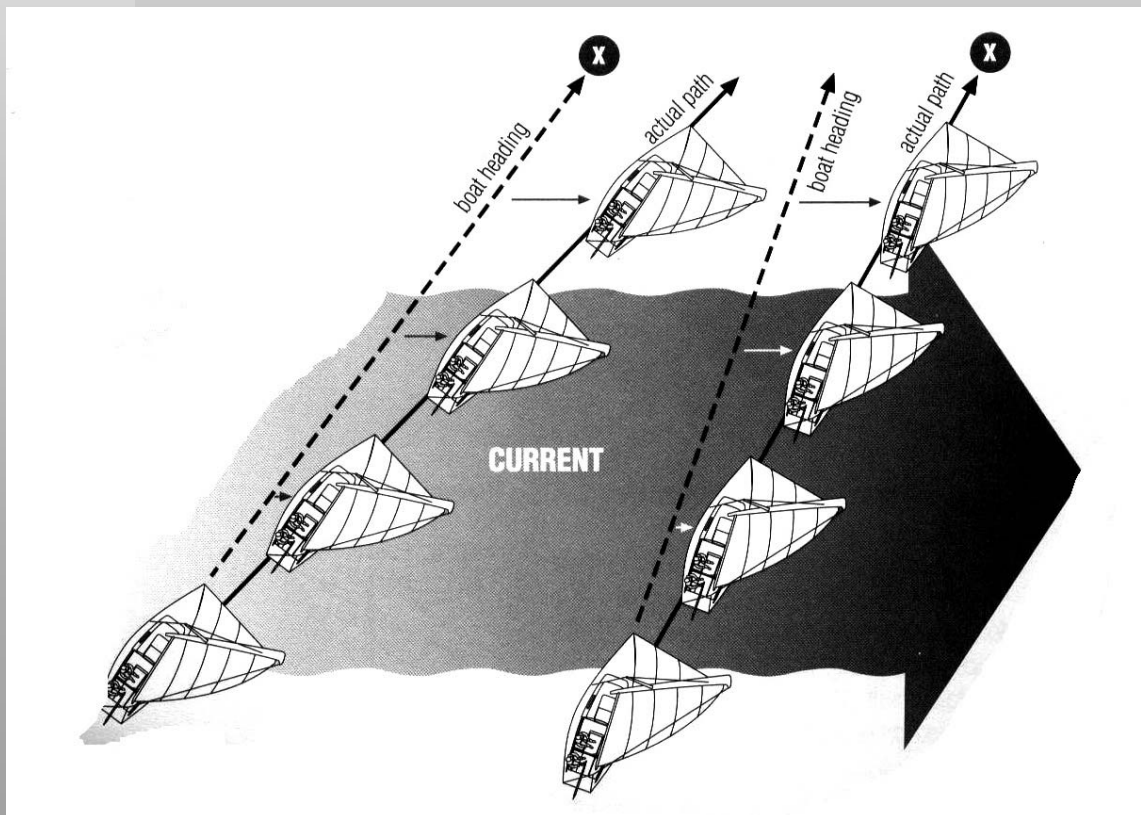
Tell What Is Happening

- **Currents pull on buoys causing them to lean**
 - Leave wake
- **Piling or shoreline**
 - Dry shows rising tide
 - Wet shows falling tide



Compensate for Current

- **When sailing across current**
 - Sail for a point “upstream”
 - Current pulls you back to desired destination or course



Tide & Current Summary

- **Water moves**
- **Takes you places**
 - You want to go
 - You don't want to go
- **Current is**
 - Weaker in shallow water
 - Stronger in deep water
 - Faster through narrows
- **Beware of**
 - Newport Bridge
 - Gull Rock
 - Rose Island
 - Dumplings